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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/835,293	04/13/2001	Erich Strasser	56/350	4866

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EXAMINER

WASHBURN, DOUGLAS N

ART UNIT	PAPER NUMBER
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2863

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/835,293	<b>Applicant(s)</b> STRASSER, ERICH	
	<b>Examiner</b> Douglas N. Washburn	<b>Art Unit</b> 2863	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 September 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 16-20, 22 and 23 is/are rejected.
- 7) ☒ Claim(s) 2-15 and 21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9 July 2001</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1 The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 16-19 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Burkhardt et al. (US 4,631,404)(Hereafter referred to as Burkhardt).

Burkhardt teaches:

Detecting several angular positions of a scanning device in relation to at least one scale by detecting position measurements of the scanning device at several scanning points(scanning unit; column 3, lines 45 and 46; figure 4, element A1) in regard to claim 1;

Determining a value for a chronological progression of a change in angular positions of a scanning device from detected several angular positions of the scanning device (luminating unit; column 7, lines 32-42) in regard to claim 1;

A position measuring system comprising at least one scale (measurement scale; column 3, line 42; figure 4, element 6) in regard to claim 16;

A position measuring system comprising a scanning device that moves relative to at least one scale along a measuring direction (scanning unit; column 3, lines 45 and 46; figure 4, element A1) in regard to claim 16;

A position measuring system comprising an evaluation module (evaluating unit; column 3, lines 54-59) comprising:

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A first module (scanning unit; column 6, lines 66-68) for determining angular positions of a scanning device from several measured position values in regard to claim 16;

A second module (luminating unit; column 7, lines 28-32) for determining a value for a chronological progression of several angular positions in regard to claim 16;

A memory device (scanning unit; column 13, lines 43-48), in which extreme values from several successive angular positions are stored in regard to claim 17;

A scanning device comprises at least two scanning points for scanning a scale and for forming measured position values, and wherein measured position values are provided to an evaluation unit, which processes a measured position values in such a way that a value for a chronological progression of angular positions is present at an output of the evaluation unit (column 7, lines 32-42) in regard to claim 18;

A scanning device comprises at least two scanning points for scanning a scale and for forming measured position values, and wherein measured position values are provided to an evaluation unit, which processes measured position values in such a way that a value for chronological progression of angular positions is present at an output of the evaluation unit (column 7, lines 32-42) in regard to claim 19;

And a first module (scanning unit; column 6, lines 66-68) and a second module (luminating unit; column 7, lines 28-32) are formed in a common component (figure 8) in regard to claim 23.

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***Claim Rejections - 35 USC § 103***

2 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Burkhardt in view of Hagl et al. (US 6,043,482)(Hereafter referred to as Hagl).

Burkhardt teaches:

A scanning device comprises at least two scanning points for scanning a scale and for forming measured position values, and wherein measured position values are provided to an evaluation unit, which processes measured position values in such a way that a value for chronological progression of angular positions is present at an output of the evaluation unit (column 7, lines 32-42) in regard to claim 18.

Burkhardt does not fully teach an evaluation unit is integrated into a scanning device in regard to claim 20.

Hagl teaches an evaluation unit is integrated into a scanning device (column 1, lines 35-38) in regard to claim 20.

Regarding claim 20, it would have been obvious to one skilled in the art at the time of the instant invention to modify the teaching of Burkhardt of a scanning device and evaluation unit with the teaching of Hagl of an optical position-measuring apparatus includes a scale, scanning unit and evaluation unit because integrating a scanning device and an evaluation unit would have simplified construction and manufacture while still providing mechanical stability.

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Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barnhardt in view of Schwaiger et al. (US 5,294,793)(Hereafter referred to as Schwaiger).

Burkhardt teaches:

A scanning device comprises at least two scanning points for scanning a scale and for forming measured position values, and wherein measured position values are provided to an evaluation unit, which processes measured position values in such a way that a value for chronological progression of angular positions is present at an output of the evaluation unit (column 7, lines 32-42) in regard to claim 18.

Burkhardt does not fully teach at least one scale comprises a first scale that is arranged parallel with a second scale on a first machine element, and at least two scanning points are arranged on a second machine element, wherein the first and second machine elements form a gantry structure in regard to claim 22.

Schwaiger teaches at least one scale comprises a first scale that is arranged parallel with a second scale on a first machine element, and at least two scanning points are arranged on a second machine element, wherein the first and second machine elements form a gantry structure (figure 5) in regard to claim 22.

Regarding claim 22, it would have been obvious to one skilled in the art at the time of the instant invention to modify the teaching of Barnhardt of a scanning device and evaluation unit with the teaching of Schwaiger of a first scale that is arranged parallel with a second scale on a first machine element, and said at least two scanning points are arranged on a second machine element, wherein said first and second machine elements form a gantry structure because the structure provides different scanning clearances between the reading devices and the measuring scales.

***Allowable Subject Matter***

3 Claims 2-15 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

Claim 2 recites, in part, "chronological progression is determined as extreme values of said detected angular positions within a period of time". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claims 5 and 9 depend from claim 2.

Claim 3 recites, in part, "chronological progression is an oscillation range of said angular positions formed from extreme values of said detected angular positions". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 10 depends from claim 3.

Claim 4 recites, in part, "forming an oscillation range as a value of said chronological progression of change in said angular positions of said scanning device from several successive differential values formed in step c". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claims 7, 8 and 11-15 depend from claim 4.

Claim 6 recites, in part, "forming an oscillation range as a value of said chronological progression of change in said angular positions of said scanning device from several successive differential values formed in step c". This feature in combination with the remaining claimed structure avoids the prior art of record.

Claim 21 recites, in part, "scale comprises two graduated tracks, which are spaced apart from each other transversely to said measuring direction, and respectively one of said scanning points is assigned to one of said two graduated tracks". This feature in combination with the remaining claimed structure avoids the prior art of record.

It is these limitations, which are not found, taught or suggested in the prior art of record, and are recited in the claimed combination that makes these claims allowable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

4 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas N. Washburn whose telephone number is (571) 272-2284. The examiner can normally be reached on Monday through Thursday 6:30 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.



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Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DNW



**MICHAEL NGHIEM**  
**PRIMARY EXAMINER**